HOW FREQUENTLY DO GASTRIC ULCERS BECOME CARCINOMATA?*

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ALTHOUGH recognizing some of the dangers of gastric ulcer, such as hemorrhage and perforation, internists generally seem oblivious to other serious complications and sequelæ, particularly carcinoma, which I believe to be due in at least 50 per cent. of all cases, to a previous ulcer.

The idea that gastric ulcer may degenerate into carcinoma is not new, it having been enunciated in 1839 by Cruveilhier. Various references to the subject may be found in literature from that time to the present. Statistics concerning the frequency of the occurrence vary, but the latest studies give the highest percentage. Thus of 156 cases of gastric cancer examined post-mortem in the pathological institute at Kiel from 1872 to 1891, Sonnichsen found that 14 per cent. undoubtedly developed from ulcers; whereas Klausa, after studying 120 cases examined in the same institute from 1891 to 1900, found that 26 per cent. originated in ulcer. Stich states that ulcer carcinoma constitutes 30 per cent. of gastric cancers. W. J. Mayo found that in 54 per cent of the cases of gastric cancer submitted to resection in 1905–6 at the Rochester Clinic, both the clinical history and pathological examination of removed specimens made it certain the cancers had their origin in ulcers. Moynihan states that in his last 22 cases of gastric cancer a history of ulcer was present in 16 or 72.1 per cent.

Robson, in his Bradshaw Lecture, reports no less than 59.3 per cent. of his cases of cancer of the stomach giving a previous history of chronic ulcer.

Ssapeshko found that of 100 gastric carcinomas only ten cases did not originate on the base of a peptic ulcer. The same author reports cases which had developed pyloric carcinoma five

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or six years after a gastro-enterostomy had been done for ulcer. Within two years I have had nine patients with cancer who gave an unmistakable history of ulcer.

Diagnosis is difficult. Cases have occurred in persons from 16 to 75 years old. The majority are in those past forty. In some cases the classical symptoms of chronic ulcer are so marked that there is no suspicion of carcinoma, and it is only when the abdomen is opened that the nature of the lesion is revealed. Even then mistakes have been made by those most experienced in gastric diseases. In other cases, after two or more years, the symptoms change so that malignant degeneration is suspected. Anorexia becomes pronounced, pain more constant, hæmatemesis more frequent, the vomited blood darker. Tuffier has described another form in which the symptoms of ulcer are absent, or present only in slight degree, but in which the signs of cancer soon develop rapidly.

Little is to be learned from gastric analysis as the chemical characteristics may be the same as in simple ulcer. Rapid and regular diminution or disappearance of hyperacidity at intervals is the most important sign. This phenomenon probably indicates that cancer is developing. The difficulty of diagnosis is the strongest plea that can be made for early exploratory operation in all gastric cases of doubtful nature failing to yield to medical treatment within a reasonable time. I advocate the *removal* of all suspicious lesions, by simple excision, pylorectomy, or partial gastrectomy, according to the conditions of the individual case.